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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/830,222

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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT

PAPER NUMBER

2621

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/830,222	<b>Applicant(s)</b> RUSSELL ET AL.	
	<b>Examiner</b> Andy S. Rao	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/25/10.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,9-11,13,14,17,18 and 27-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,12,15,16,19-26 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's arguments with respect to claims 1-3, 6-8, 12, 15-16, 19-26, 44 (amended) as filed on 4/30/10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6-8, 12, 15-16, 19-20, 23-26, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lofgren et al, (hereinafter referred to as “Lofgren”) in view of Rhoads and further in view of Jain et al., (hereinafter referred to as “Jain”).

Lofgren discloses a method for processing and outputting video frames (Lofgren: figures 5-6) comprising: receiving a stream of video frames from a first platform (Lofgren: column 3, lines 65-67; column 2, lines 9-15); receiving geo-location data from a second platform (Lofgren: column 4, lines 1-5; column 11, lines 60-65); inserting the geo-location data into at least one video frame to generate a modified video frame (Lofgren: column 4, lines 40-50); and outputting the modified video frame (Lofgren: column 10, lines 50-60), as in the claim 1. However, Lofgren fails to disclose the steps of “...superimposing at least one of the modified video frames onto a terrain map of a region of interest wherein objects within the at least the modified video frame are portrayed on a corresponding geo-location in the terrain map...”, “...generate a stream

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containing modified video frames...”, and “...outputting at least one frame in the stream of superimposed modified video frames based on the inserted geo-location data...”, as in the claim. Rhoads discloses a method of steganographically embedding geo-location data in media (Rhoads: column 4, lines 20-50) which discloses the steps of superimposing the modified video frame onto a terrain map of a region of interest wherein objects (Rhoads: column 3, lines 5-42) within the modified video frame are portrayed on a corresponding geo-location in the terrain map (Rhoads: column 2, lines 55-65; column 6, lines 15-53) in order to provide detailed indicia to users of the method in the fields of remote sensing and remote piloting applications (Rhoads: column 9, lines 19-22). Therefore, given Rhoads, it would have been obvious for one of ordinary skill in the art to incorporate the teaching the Rhoads superimposing step into the Lofgren method in order to provide detailed indicia to users of the image data when said image data is generated for remote sensing and remote piloting applications. The Lofgren method, now incorporating the Rhoads superimposing step, has a majority of the features of claim 1, but still fails to disclose the limitations that “generate a stream containing modified video frames...”, and “...outputting at least one frame in the stream of superimposed modified video frames based on the inserted geo-location data...” as in the claim, even though Lofgren clearly suggests to one of ordinary skill in the art to apply the teachings to video (Lofgren: column 12, lines 14-16). Jain discloses that is known to catalog streamed video (Jain: column 4, lines 35-67) according to metadata which includes geo-location data (Jain: column 7, lines 45-60) for video clip generation for selective playback (Jain: column 13, lines 35-67; column 14, lines 1-12). Accordingly, given this teaching it would have been further incorporate the Jain video stream servers for streamed video cataloging including the use of geo-location data as metadata, into the Lofgren-Rhoads

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combination in order to allow for video clip generation for selective playback. The Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, has all of the features of claim 1.

Regarding claim 2, the Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, discloses wherein the geo-location data inserted into a particular video frame is based on the geo-location data of a scene in the particular video frame (Lofgren: column 3, lines 55-64; column 4, lines 10-15), as in the claim.

Regarding claim 3, the Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, discloses wherein a time tag is also inserted into the video frame (Lofgren: column 4, lines 40-45: “file history”), as in the claim.

Regarding claim 6, the Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, discloses storing the stream of modified video frames (Lofgren: column 4, lines 50-55), as in the claim.

Regarding claim 7, the Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, discloses searching the stored geo-location data to identify geo-location data satisfying criteria specified in at least one search command (Lofgren: column 5, lines 5-15); and transmitting the identified geo-location data and video frames corresponding to the identified geo-location data (Lofgren: column 4, lines 1-6), as in the claim.

Regarding claim 8, the Lofgren method, now incorporating the Rhoads superimposing step, discloses wherein the time tags associated with the video frames are stored along with the geo-location data (Lofgren: column 4, lines 40-50), as in the claim.

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Regarding claim 12, the Lofgren method, now incorporating the Rhoads superimposing step and the Jain streamed video cataloging, discloses generating an index using the geo-location data and the time tags (Lofgren: column 4, lines 47-52); and searching the index based on the geo-location data or the time tags, wherein the outputted modified video frames are those video frames which are associated with the searched for geo-location data or the time tags (Lofgren: column 5, lines 25-40), as in the claim.

Regarding claim 15, the Lofgren method, now incorporating the Rhoads superimposing step, discloses wherein the geo-location data is inserted into a visible portion of the video frame (Lofgren: column 5, lines 5-15), as in the claim.

Regarding claim 16, the Lofgren method, now incorporating the Rhoads superimposing step, discloses wherein the geo-location data is inserted into a non-visible portion of the video frame (Lofgren: column 7, lines 30-40), as in the claim.

Regarding claim 19, the Lofgren method, now incorporating the Rhoads superimposing step, discloses wherein the modified video frame is output onto a computer generated terrain map of a region of interest such that the modified video frame (Lofgren: column 3, lines 55-62), and any targets of interest are located within a proper geo-location within the displayed terrain map (Lofgren: column 1, lines 30-67; column 2, lines 1-53).

Lofgren discloses a system (Lofgren: figure 1) comprising: a receiver which receives from a first platform a stream of video frames (Lofgren: column 8-10) from a first platform (Lofgren: column 3, lines 65-67) and receives geo-location data from a second platform (Lofgren: column 4, lines 1-4; column 11, lines 60-65); a first processor which inserts the geo-location data into the stream of video frame to generate a modified video frame (Lofgren:

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column 4, lines 40-50); an output for outputting the modified video frame (Lofgren: column 10, lines 50-60), as in claim 20. However, Lofgren fails to disclose a first processor further

“...generates a stream of modified video frames...”, “a second processor that superimposes at least one of the modified video frame frames onto a terrain map of a region of interest, wherein objects within the at least one modified video frame are portrayed on a corresponding geo-location in the terrain map...” and “...an output for outputting that transmits the at least one superimposed modified video frame based on the inserted geo-location data...” as in the claim.

Rhoads discloses a method of steganographically embedding geo-location data in media (Rhoads: column 4, lines 20-50) which discloses the steps of superimposing the modified video frame onto a terrain map of a region of interest wherein objects (Rhoads: column 3, lines 5-42) within the modified video frame are portrayed on a corresponding geo-location in the terrain map (Rhoads: column 2, lines 55-65; column 6, lines 15-53) in order to provide detailed indicia to users of the method in the fields of remote sensing and remote piloting applications (Rhoads: column 9, lines 19-22). Therefore, given Rhoads, it would have been obvious for one of ordinary skill in the art to incorporate the teaching the Rhoads superimposing means into the Lofgren system in order to provide detailed indicia to users of the image data when said image data is generated for remote sensing and remote piloting applications. The Lofgren system, now incorporating the Rhoads superimposing step, has a majority of the features of claim 1, but still fails to disclose the limitations that “...generate a stream containing modified video frames...”, and “...output at least one frame in the stream of superimposed modified video frames based on the inserted geo-location data...” as in the claim, even though Lofgren clearly suggests to one of ordinary skill in the art to apply the teachings to video (Lofgren: column 12, lines 14-16). Jain

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discloses that is known to catalog streamed video (Jain: column 4, lines 35-67) according to metadata which includes geo-location data (Jain: column 7, lines 45-60) for video clip generation for selective playback (Jain: column 13, lines 35-67; column 14, lines 1-12). Accordingly, given this teaching it would have been further incorporate the Jain video stream servers for streamed video cataloging including the use of geo-location data as metadata, into the Lofgren-Rhoads combination in order to allow for video clip generation for selective playback. The Lofgren system, now incorporating the Rhoads superimposing processor and the Jain streamed video servers, has all of the features of claim 20.

Regarding claim 23, the Lofgren system, now incorporating the Rhoads superimposing means and the Jain streamed video servers, discloses a transmitter connected to the output for transmitting the modified video frame (Lofgren: column 4, lines 30-40), as in the claim.

Regarding claims 24-25, the Lofgren system, now incorporating the Rhoads superimposing means and the Jain streamed video servers, discloses a memory for storing the video frames along with associated geo-location data (Lofgren: column 4, lines 30-35), wherein the processor indexes the geo-location data, searches the geo-location data based on a search input, and the output modified video frame is a video frame corresponding to the search input (Lofgren: column 4, lines 30-50), as in the claim.

Regarding claim 26, the Lofgren system, now incorporating the Rhoads superimposing means and the Jain streamed video servers, discloses wherein the memory also stores time tags and sensor data associated with each of the video frames (Lofgren: column 4, lines 40-45: "file history"), and wherein the processor indexes the geo-location data, searches the geo-location data, the time tags and/or the sensor data based on a search input, and the output modified video



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frame is a video frame corresponding to the search input (Lofgren: column 5, lines 5-25), as in the claim.

Regarding claim 44, Lofgren system, now incorporating the Rhoads superimposing means and the Jain streamed video servers, determining the geo-location data using at least positioning information of the second platform and a distance between a scene in a particular video frame and the second platform (Lofgren: column 4, lines 40-50), as in the claim.

4. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lofgren et al, (hereinafter referred to as “Lofgren”) in view of Rhoads and Jain et al., (hereinafter referred to as “Jain”) as applied to claim 20, and further in view of in view of Josypenko.

The Lofgren system, now incorporating the Rhoads superimposing means and the Jain streamed video servers, has a majority of the features as in claims 21-22, as has been discussed concerning preceding claim 20. However, the Lofgren-Rhoads combination fails to particularly disclose wherein the antenna is a linear taper antenna that is arranged to receive and transmit radar signals. Josypenko discloses a tapered direct fed quadrifilar helix antenna that incorporates the use of a linear taper (Josypenko: column 5, lines 45-55) and further discloses the use of the antenna for receiving and transmitting radar signals (Josypenko: column 5, lines 10-25) in order to have a compact antenna with good cardioid characteristics with circular polarization (Josypenko: column 3, lines 60-67) in communications between fixed ground stations and mobile stations (Josypenko: column 1, lines 25-37). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Josypenko antenna linear taper antenna into the Lofgren-Rhoads system as its transmission/reception means for its aerial platform in order to gain the benefits of having an

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antenna with desired cardioid characteristics with circular polarization to allow for communications between the mobile station of the aerial platform and the ground stations of the Lofgren system. The Lofgren system, now incorporating the Rhoads superimposing processor and the Jain video stream servers and the Josypenko linear taper antenna, has all of the features of claims 21-22

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Foote discloses systems and methods for providing a spatially indexed panoramic video.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao  
Primary Examiner  
Art Unit 2621

asr  
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Primary Examiner, Art Unit 2621  
July 16, 2010